

Completing the Square

Convert each of the following into Vertex form using Completing the Square. State the vertex and whether it is a maximum or a minimum of the graph.

1. $y = x^2 + 10x + 15$

2. $y = x^2 - 8x - 4$

3. $y = x^2 + 14x - 14$

4. $y = -x^2 + 2x + 4$

5. $y = x^2 - 6x + 17$

6. $y = 2x^2 + 12x + 17$

7. $y = 2x^2 - 20x + 22$

8. $y = -x^2 + 4x - 10$

Convert the following from Vertex form to Standard form.

9. $y = 3(x + 2)^2 - 4$

10. $y = (x - 7)^2 + 13$